# MAGNUM



Tough build-up alloy for steels offering superior compression and impact resistance



- **D** Excellent operation on low voltage AC machines.
- **D** Deposits easy to machine tough weldments.
- □ All position capabilities allows for cladding in position.
- **D** Straight polarity (DC-) option doubles build-up speed.

INTERNATIONAL NONE APPLICABLE TO THIS PROPRIETARY PRODUCT

## **APPLICATIONS:**

Build-up and cladding of carbon and low alloy steels. Heavy thicknesses will not crack.

## MICROSTRUCTURE:

In the as-deposited condition, the microstructure consists of martensite with some carbides.

ALL	WELD	METAL	ANALYSIS	(Typical	Weight	%):
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С	Mn	Si	Р	S	Cr	Ni	Mo	V	W	Cb	Fe
.29	2.37	.61	.012	.016	1.0	.08	.03	.03	.01	.01	bal

FLUX COLOR: Dark grey

TYPICAL MECHANICAL PROPERTIES	5:
Undiluted Weld Metal	$\mathbf{M}$

Hardness

Maximum Value Up to: Rockwell C33-38 Brinell 310-350 Vickers 340-380

RECOMMENDED CURRENT: DC Reverse (+), Straight (-) or AC

#### **RECOMMENDED AMPERAGE SETTINGS:**

Diameter (mm)	1/8 (3.25)	5/32 (4.0)	3/16 (5.0)
Minimum Amperage	90	120	160
Maximum Amperage	110	140	180

WELDING POSITIONS: Flat, Vertical up, Horizontal, Overhead

#### **DEPOSITION RATES:**

Diameter (mm)	Length (mm)	Weldmetal/ Electrode	Electrodes per lb (kg) of Weldmetal	Arc Time of Deposition min/lb (kg)	Amperage Setting
1/8 (3.25)	14" (350)	.59oz (17g)	27 (60)	21 (47)	115
5/32 (4.0)	14" (350)	1.1oz (30g)	15 (32)	18 (39)	175
3/16 (5.0)	14" (350)	1.8oz (50g)	9 (20)	13 (28)	220

### WELDING TECHNIQUES:

Remove fatigued metal. Weld deposits can be made using stringer or weave technique. For very high build-ups use DC straight polarity (-).